2009 LUMIX®
DMC-TS1 Digital Camera

3m Water Proof, Dust Proof, 1.5m Shock Proof

- HD video recording
- 40MB built-in memory
- ½.33" CCD 12.7 megapixels

Intelligent Auto Mode
Completely automatic to help prevent shooting errors.

4.6x Optical Zoom
28mm wide angle LUMIX® Lens

LUMIX®
DIGITAL CAMERAS

Panasonic
ideas for life

LUMIX®
DIGITAL CAMERAS

Panasonic ideas for life

2009 LUMIX® DMC-TS1 Digital Camera Specifications

				DMC-TS1
METRICS	Dimensions (W x H x D)			98.3 x 63.1 x 22.7 mm (3.87 x 2.49 x 0.89 in)
	Weight			Approx. 162.5g (0.36 lb), \Approx. XXXg with Battery and SD Memory Card (XXX lb)
OPTICS	**Pixels**	Camera Effective Pixels		12.1 Megapixels
	CCD	Sensor Size / Total Pixels / Filter		1/2.33-inch / 12.7 Total Megapixels / Primary Color Filter
	Lens	Aperture		F3.3 - 5.9 / 2-Step (F3.3 - 11 (W) / F5.9 - 18 (T))
		Optical Zoom		4.6x
		Focal Length		f=5.0-23.0mm (28-130mm in 35mm equiv.)
		Extra Optical Zoom (EZ)		5.6x (4:3 / 8M), 7.2x (4:3 / 5M), 9.0x (under 3M)
		Lens		9 elements and 1 prism in 8 groups, (5 Aspherical Lenses / 6 Aspherical surfaces, 1 ED lens)
		2-Speed Zoom		—
		Optical Image Stabilizer		MEGA O.I.S. (Auto / Mode1 / Mode2)
		Conversion lens Compatibility		—
		Digital Zoom		4x, (Max. 18.4 x combined with Optical Zoom without Extra Optical Zoom), (Max.36.0x combined with Extra Optical Zoom)
	Focus	Focusing Area		Normal: Wide 50cm - infinity, Macro / Intelligent AUTO : Wide 5cm / Tele 30cm - infinity
		Focus Range Display		Yes
		AF Assist Lamp		Yes
		Focus		Normal / Macro, Continuous AF (On / Off), AF Tracking (On / Off), Quick AF (On / Off)
		AF Metering		Face / AF Tracking / Multi (11pt) / 1pt HS / 1pt / Spot
	Shutter	Shutter Speed		8-1/1300 sec (Selectable minimum shutter speed) Starry Sky Mode : 15, 30, 60sec.
	Finder	Viewfinder		—
RECORDING	**iA**	Face Recognition		Still
		Optical Image Stabilizer		Still & Movie
		Intelligent ISO Control		Still
		Face Detection		Still & Movie
		Intelligent Scene Selector		Still (Portrait, Scenery, Night Portrait, Night Scenery, Macro), & Movie (Portrait, Scenery, Low Light, Macro)
		Intelligent Exposure		Still & Movie
		AF Tracking		Still
		Digital Red Eye Correction		Still
		iA Direct Button		—
	File	File Format		Still Image: JPEG (DCF / Exif2.21), Image with Audio: JPEG (DCF / Exif2.21) + QuickTime, Motion picture: AVCHD Lite, QuickTime Motion JPEG
		AVCHD Lite REC		NTSC / PAL (Depends on Region)
	Interface	Mode Switch		[Recording] / [Playback]
		One-Touch Movie Button		Yes
	Recording Modes	Mode Dial		Intelligent AUTO, Normal Picture, SCN, Beach & Surf, Snow, Sports, Clipboard
		Mode Button		—
		Scene Mode		Portrait, Soft Skin, Transform, Self-Portrait, Scenery, Panorama Assist, Night Portrait, Night Scenery, Food, Party, Candle Light, Baby1, Baby2, Pet, Sunset, High sensitivity, Hi-Speed Burst (Image Priority / Speed Priority), Flash Burst, Starry Sky, Fireworks, Aerial photo, Pinhole, Film Grain, Underwater
		Continuous Shooting Mode		Full-Resolution Image, 2.3 frames/sec Max. 5 images (Standard mode), Max 3 images (Fine Mode), High-speed Burst Mode: approx. 6.0 frames/sec (image priority), approx. 10 frames/sec (speed priority), (recorded in 3M for 4:3, 2.5M for 3:2, 2M for 16:9)
		Unlimited Consecutive Shooting		1.8 frames/sec
		Motion Picture Recording	4:3	VGA: 640 x 480 pixels, 30fps (Motion JPEG), QVGA: 320 x 240 pixels, 30 fps (Motion JPEG)
			16:9	WVGA: 848 x 480 pixels, 30 fps (Motion JPEG)
			HD Movie	1280x720, 60P (AVCHD, SH: 17Mbps / H:13Mbps / L:9Mbps) / 30fps (Motion JPEG)
	Exposure Parameters	Exposure		Program AE
		Exposure Compensation		1/3 EV step, +/-2 EV
		Backlight Compensation		Yes (only in Intelligent AUTO mode)
		Auto (AE) Bracketing		+/- 1/3 EV –1EV step, 3 frames
		Color Bracketing		—
		Multi-Aspect		—
		Light Metering		Intelligent Multiple
		ISO Sensitivity		Auto / 80 / 100 / 200 / 400 / 800 / 1600 High Sensitivity (ISO 1600-6400)
		Max Auto ISO Setting		—
		Multi-Exposure		—
	Image Parameters	Aspect Ratio		4:3 / 3:2 / 16:9
		Still Picture Recording	4:3	4000 x 3000(12M)/ 3264 x 2448 (8M EZ) / 2560 x 1920 (5M EZ) / 2048 x 1536 (3M EZ) / 1600 x 1200 (2M EZ) / 640 x 480 (0.3M EZ)
			3:2	4000 x 2672(10.5M) / 3264 x 2176 (7M EZ) / 2560 x 1712 (4.5M EZ) / 2048 x 1360 (2.5M EZ)
			16:9	4000 x 2248(9M) / 3264 x 1840 (6M EZ) / 2560 x 1440 (3.5M EZ) / 1920 x 1080 (2M EZ)
		Image Quality		Fine / Standard
		White Balance		Auto / Daylight / Cloudy / Shade / Halogen / White Set, White Balance Adjustment (±10steps, except for auto set), (Selectable at Portrait, Soft Skin, Transform, Self-Portrait, Sports, Baby, Pet, High Sensitivity, Highspeed Burst, Pinhole mode
		Quick Menu		Yes
		Color Effect		—
		Picture Adjustment		—
		Color Mode		Standard, Natural, Vivid, Black & White, Sepia, Cool, Warm
	Others	Still Image with Audio Recording		5 sec
		Audio Dubbing		Max. 10sec
		Flip Animation		—
		Real-time Histogram		Yes
		Composition Guide Line		Yes (2 patterns)
		Auto Review		1sec, 2sec, Zoom, Hold
		Review		Yes
		Easy Zoom / Zoom Resume		No / No
		Optical Zoom in Motion Picture		Yes
		Zoom Macro		Yes
		Orientation Detector		Yes
		Scene Mode Help Screen		Yes
		Self Timer		2sec / 10sec
		Focus Icon Select		Yes (in Face Recognition only)
PLAYBACK	**Display**	Playback Mode		Normal Playback, Slideshow, Mode Playback, Category Playback, Favorites Playback
		Easy Organization		—
		Touch Zoom		—
		Thumbnails / Zoomed Playback		12,30-thumbnails / Max 16x
		Calender Display / Dual-Image Playback		Yes / No
		Set Favorites / Rotate Image		Yes / Yes
		Playback Still Images with Audio		Yes
		Playback Motion Picture		Yes (AVCHD / Motion JPEG)
		Slideshow Mode		All / Still Images Only / Motion Picture Only / Favorites / Category BGM Effect (Natural / Slow / Swing / Urban / OFF)
		Show Histogram		Yes
		Show Highlights		—
	Delete	Delete Image		Single / Multi / All / All except Favorites
	Edit	DPOF Print Setting / Set Protection		Yes / Yes
		Resize / Trim / Aspect Conv. / Leveling		Yes / Yes / Yes / Yes
		Copy / Title Stamp / Text Stamp		Yes / Yes / Yes
		Cut Animation		—
		PictBridge Support		Single / Multi / All / Favorites / DPOF
SETUP	OSD language			English, German, French, Italian, Spanish, Polish, Czech, Hungarian, Russian, Chinese (Traditional),Chinese (Simplified), Netherlandic, Thai, Korean, Turkish, Portuguese, Arabic, Persian, Japanese, Swedish, Danish, Finnish
	Viera Link™			Yes
	HDMI Output			Video: Auto / 1080i / 720p / 480p Audio: Dolby Digital Creator (Dolby AC3)
	Movie REC Guide			Yes
	Wind-Cut in Motion Picture			Yes
	Travel Date / World Time			Yes / Yes
OTHERS	**Monitor**	LCD Monitor		2.7" TFT LCD Display (230K dots), Field of View : approx. 100%, Wide Viewing Angle, AUTO Power LCD mode, Power LCD mode
	Tough	Water Proof		3.0m IPX8 compliant
		Dust Proof		Yes (IP5X compliant)
		Shock Proof		1.5m MIL-STD compliant
	Flash	Built-in-Flash		Auto, Auto/Red-eye Reduction, Forced On, Slow Sync./Red-eye Reduction, Forced Off, 0.6 - 5.3m (Wide/ISO Auto), 1.0 - 3.6m (Tele/ISO Auto)
		External Flash		—
	Media	Recording Media		Built-in Memory, SD Memory Card, SDHC Memory Card, MultiMediaCard (Still image only)
		LED Illumination		Yes
	Audio	Built-in-Memory		Approx. 50MB
		Microphone / Speaker		Mono / Yes
	Interface	Interface		miniHDMI, USB2.0 High speed / AV Output (Stereo Type, NTSC/PAL) / DC Input (requires optional Multi-Adapter)
	Power	Power		ID-Security Li-ion Battery Pack (3.6V, 940mAh) (Included), AC Adaptor (Input: 110-240V AC) (Optional)
		Battery Life (approx.)		300 pictures (CIPA Standard)
	Standard Package	Included Software		PHOTOfunSTUDIO v3.0 HD Edition, ArcSoft (MediaImpression / Panorama Maker), USB Driver, QuickTime
		Standard Accessories		Battery Charger, Battery Pack, Battery Carrying Case, AV Cable, USB Connection Cable, AC Cable

Notice: VIERA™ Link is a new name for EZ Sync™. Not All 2008 VIERA Link™ features are compatible with all 2006/2007 EZ Sync™ products.